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STATISTICAL BULLETIN
Metropolitan Life Insurance Co.

VOL. V. JANUARY, 1924 No. 1.

NINETEEN TWENTY-THREE A RECORD HEALTH YEAR.

Nineteen twenty-three was distinguished as one of the best health years in the history of the United States and Canada.

The above conclusion is based on the 1923 health record of approximately fifteen million Industrial policyholders of the Metropolitan Life Insurance Company—nearly one-seventh of the combined populations of the two countries. The deathrate of this important cross-section of the American people in 1923 was 8.9 per 1,000; in 1922 it was 8.8; and in 1921, 8.7. These are the three best years in the sanitary history of the United States and Canada as is proved by the rates for their industrial populations for such prior years as 1919 (10.6); 1917, (11.6); 1913, (12.0); and 1911 (12.5).

Some New Records.

The year 1923 established several "records."

The deathrate for the third quarter (7.4 per 1,000) was **the lowest ever recorded for any three months' period among Metropolitan Industrial policyholders.**

The deathrate for the fourth quarter (7.9 per 1,000) **was the lowest ever registered for this quarter of any year.**

The deathrate for the final six months (7.7 per 1,000) was **the lowest ever recorded for this period of any year.**

For a number of diseases of major public health interest such as typhoid fever, diphtheria, tuberculosis, diarrheal disease and puerperal septicemia, **lower rates were registered in 1923 than ever before in the history of the industrial populations of the United States and Canada.**

Lower Mortality of White Population.

There was a slight decline in the mortality of the white industrial population in 1923. The rate fell from 8.19 per 1,000 in 1922 to 8.17 in 1923. Among nearly two million colored policyholders, however, the mortality rose from 13.6 per 1,000 in 1922 to 14.5 last year. The slight rise in 1923 in the combined mortality was due entirely to the higher deathrate among colored persons.

The Year Began Badly.

The excellent health record of 1923 was made **despite** a bad beginning. During the first quarter there was high mortality from influenza and pneumonia, and the epidemic prevalence of the former was reflected also in increased deathrates during the months January to March for organic heart diseases and Bright's disease. Influenza in 1923 was an important factor, as in previous epidemics, in hastening the deaths of many persons afflicted with these chronic ailments. By the end of the first quarter a higher deathrate had been recorded than for the corresponding period of 1922 and decidedly higher rates than for the first three months of 1921.

Health Record Improved in the Spring.

In April, the deathrate fell sharply, reflecting the seasonal decline that is always expected at that time of the year. It was not until May, however, that comparisons with similar periods of the preceding year began to indicate that the health situation had taken a decided turn for the better. In May and June, lower deathrates were recorded than for 1922 and, as we have pointed out, the remaining six months were the best ever recorded.

Typhoid Fever Again Declines.

The lower deathrate for typhoid fever in 1923 constitutes a further triumph for official sanitary administration. The new rate was 5.1 per 100,000, a reduction of 10.5 per cent. since 1922 and of 77.6 per cent. since 1911. The average annual decline in the deathrate since 1911 has been at the rate of 1.4 per 100,000.

Fewer Deaths from Diphtheria and Scarlet Fever.

The deathrate for diphtheria in 1923 (15.2 per 100,000) was the lowest ever recorded among Industrial policyholders. It represents a per cent. reduction of 15.6 from the 1922 rate and of 44.3 per cent.

from the 1911 figure. There is already much reason for acclaiming the increasing administration of toxin-antitoxin to school children. The outlook for future control of diphtheria is better than ever before. There was also a decline in scarlet fever with a rate of 4.4 per 100,000 which is the lowest since 1919.

Decrease in Tuberculosis Mortality.

The decline during the past twenty years in the tuberculosis deathrate is without parallel as an accomplishment in public health history. It is still going on. The 1923 figure of 110.2 per 100,000 represents a decline of 3.5 per cent. since 1922. There has been a continuous fall in the mortality since 1918, when a rate of 189.0 was recorded. Ten years ago the tuberculosis deathrate (206.7) was nearly double the present figure; in 1911, it was more than double. The per cent. reduction since 1922, it is true, is small, but the important item is that **the downward swing of the tuberculosis deathrate still continues.**

The decline of the tuberculosis deathrate in 1923 was due, for the most part, to a fall of 3.6 per cent. in the mortality of the white policyholders. The rate among the colored was practically unchanged. This is in direct contrast to what happened in 1922; when the decline from 1921 was due to the greater fall among the colored people. Among the whites the greatest decrease was recorded for the age period fifteen to twenty-four years; among the colored, the most significant decline was for the period of childhood.

The tuberculosis deathrate of colored policyholders at all ages, in 1923 (224.4 per 100,000) was approximately three times that of the whites (84.1). The greatest contrast between the colored and white rates is found at the ages of childhood. Colored children in 1923 had a deathrate more than eight times the rate for the whites.

Diarrheal Diseases.

The low mortality recorded in 1923 for diarrheal complaints marks the continuance of the distinct downward trend that has now been in evidence for a considerable period of years. The fall has been continuous since 1916, and the 1923 deathrate (9.6 per 100,000) is only a little over one-third the 1916 figure (26.2). In 1911 the deathrate for diarrheal complaints was 28.0. Low mortality from these diseases is of course favored by cool summers, and that of 1923 was conspicuously so. But this cannot be said to account entirely for the low deathrate that was recorded, since for eight years, with heated

seasons of variable severity, there has been a continuous decline in the deathrate. The declining mortality from diarrheal diseases is another triumph for sanitary science. The growing practice of milk pasteurization and the regulation of its sale; the increasing knowledge of the principles of infant feeding; the improvement of water supplies and the increasingly greater care required by the ordinances of many cities in the handling of foods all have undoubtedly played their part in bringing about this result.

Decline in Diseases Incidental to Pregnancy and Childbirth.

There was a gratifying fall in the mortality from puerperal conditions in 1923 with a rate of 17.9 per 100,000 as compared with 19.0 in 1922, and 23.0 in 1920. The 1923 figure is the lowest ever recorded among the Industrial population with a single exception. Diseases incidental to pregnancy and childbirth are still an important field for public health work. The mortality can be further reduced by greater emphasis on nursing supervision during pregnancy, and adequate care at the time of delivery and during the immediate postpartum period. Especially encouraging are the lower deathrates this year from puerperal septicemia and albuminuria. The former, in particular, may be brought down still further by the closer attention of obstetricians and health officers to sources of infection.

A Number of Causes Show Increased Mortality in 1923.

The most conspicuous examples of rising deathrates in 1923 are measles, whooping cough, influenza, pneumonia, heart diseases, homicides and accidents—more particularly automobile accidents.

Measles and Whooping Cough.

Nineteen twenty-three was a "measles year," with a deathrate of 8.2 per 100,000 as compared with 4.3 in 1922 and 3.2 in 1921.

The number of measles deaths was, this year, almost equal to those from scarlet fever and whooping cough combined. It is such an aberrant experience that brings home to health workers the importance of measles as a cause of child mortality and morbidity. It is hoped that this year and those following will show progress in the development of measures for the control of the disease. Possibly the contemplated use of convalescent serum will help in this connection.

The whooping cough rate also showed a pronounced rise over that for the previous year, but the mortality from this disease was lower than for the majority of the years of the last decade.

Influenza and Pneumonia.

Influenza became one of the major causes of death in 1923 as the result of its epidemic prevalence during the first quarter. This disease, together with pneumonia, was responsible for more than twenty per cent. of the total mortality during the first three months. The outbreak was observed first in a number of Southern states, namely, Georgia, Tennessee and the Carolinas. It was soon afterward reported from adjacent sections and from other parts of the country. Increased morbidity and mortality were recorded in "border" cities like Baltimore, Washington and Cincinnati and were also observed in Middle West cities and along the Atlantic Seaboard.

The type of influenza prevailing in 1923 differed in important particulars from that of the great world pandemic of 1918-1919. There was no concentration of cases and deaths between the ages of twenty and forty-five years as was observed in 1918. The influenza mortality in 1923 occurred, for the most part, in early childhood and after the age of forty-five.

Another important difference between the influenza of 1923 and that of the great world pandemic is that the former did not seriously affect the deathrate for puerperal diseases.

The 1923 type was not, by and large, the kind which runs quickly into pneumonia and causes death after running a very short course; but, notwithstanding this, it caused a sufficient number of deaths to prevent 1923 being recorded as the record health year of all time.

For pneumonia alone the deathrate in 1923 rose to 76.5 per 100,000 as compared with 73.7 during 1922. The increase is small in view of the presence of an influenza epidemic. Very low pneumonia rates prevailed during the last half of 1923.

Organic Heart Disease.

Heart diseases again showed an increased deathrate in 1923, continuing the upward swing that has been observed since 1919. As in 1922, heart disease was the leading cause of death.

More Homicides in 1923.

The rise in the homicide rate from 6.3 per 100,000 in 1922 to 7.3 in 1923 is disquieting. With the single exception of 1917, the 1923 homicide deathrate is the highest we have ever recorded among the Industrial policyholders. No progress has been made in America in the last two decades toward reducing its homicide rate, which is about

twelve times as high as that prevailing in England. It should be noted, however, that this is due, very largely, to the high homicide mortality in America among colored persons.

Alcoholism Deathrate Increases for Third Successive Year.

Deaths from alcoholism numbered 436 in 1923, with a deathrate of 3.0 per 100,000. There were 293 deaths in 1922, with a rate of 2.1; only 122 deaths in 1921 with a rate of 0.9; and but 77 deaths in 1920 with a rate of 0.6. The figure for 1923 was the highest deathrate recorded since 1917 when it was 4.9 per 100,000. While it is still lower than the rates for all years prior to 1917, the rate may well rise to these earlier figures if the continuously upward trend is not changed.

During 1922 and 1923, 729 deaths were recorded from alcoholism, of which 724 occurred in the United States and five in the Canadian Province of Ontario. There were no deaths in any other Canadian Province.

Accompanying the increase in the mortality from alcoholism, there has been a pronounced decline in that from wood alcohol poisoning. From this cause 71 deaths were registered in 1921, 36 in 1922, and but 27 in 1923.

Deaths from cirrhosis of the liver, which is closely associated with alcoholism, rose from 801 in 1922 to 841 in 1923. The death rate for this condition, however, remained unchanged, being 5.8 per 100,000 for each year.

Accidents Increase.

The year had, altogether, a very unsatisfactory record on the score of public safety. The accident deathrate increased from 58.0 per 100,000 in 1922 to 62.7 in 1923—a rise of more than eight per cent. Slight increases were recorded for accidental burns, machinery accidents and railroad accidents; and considerable increases for accidental falls and automobile accidents. The only decline registered was for accidental drowning. For this cause the rate was 6.7 per 100,000, which is the lowest ever recorded among the Industrial policyholders.

Probably Fifteen Thousand Fatal Automobile Accidents in United States in 1923.

Another increase (of 13.2 per cent.) was registered in the deathrate for automobile fatalities. This form of accident has now become one of the major causes in American mortality statistics. Its 1923 deathrate of 15.4 per 100,000 may be compared with 10.3 five years

ago—a rise of approximately 50 per cent.; and with 4.1 ten years ago—an increase of almost 300 per cent. It is obvious that no method has yet been found to safeguard the lives of the American people against this form of accidental death. On the basis of these figures for the insured, we may safely estimate that the total number of automobile fatalities in the United States in 1923 was more than 15,000.

No Significant Changes for Several Important Causes.

The deathrates for cancer, cerebral hemorrhage, chronic Bright's disease and suicides were substantially the same as those for 1922. This fact, however, is especially significant with respect to cancer. There is, as yet, no sign of a turn for the better in the mortality from this disease. In the industrial population there has been, in fact, no important favorable change in the crude deathrate for this disease in the last decade.

Suicide mortality has been much more favorable in each of the six years since 1917 than in prior years. This may be ascribed, in part at least, to the more favorable economic conditions that have prevailed among American and Canadian wage-earners during this period.

The table on page 8 shows the deathrates for the more important diseases and conditions among policyholders in the Industrial Department of the Metropolitan Life Insurance Company in each year of the period 1913-1923.

Metropolitan Life Insurance Company
Deathrates per 100,000 for Principal Causes. Premium-Paying Business in Industrial Department.
1913 to 1923.

Cause of Death	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913
All Causes of Death	891.3	882.9	870.6	989.4	1063.0	1559.2	1161.1	1168.1	1130.9	1152.8	1199.4
Typhoid fever	5.1	5.7	6.7	6.7	7.3	11.5	12.1	13.0	12.9	16.1	18.4
Communicable dis. of childhood	32.1	29.8	37.9	43.1	31.5	41.6	46.8	40.8	36.4	48.2	58.1
Measles	8.2	4.3	3.2	8.5	3.5	8.6	11.1	9.9	5.7	6.9	12.3
Scarlet fever	4.4	4.9	7.0	6.0	3.9	3.6	6.0	4.1	4.6	9.8	12.7
Whooping cough	4.3	2.6	3.9	6.6	3.2	10.1	5.1	5.8	4.7	5.8	5.9
Diphtheria	15.2	18.0	23.8	22.1	20.9	19.3	24.6	21.0	21.4	25.7	27.2
Influenza and pneumonia	106.5	95.3	76.5	159.5	214.1	542.2	135.4	138.1	119.5	111.6	118.4
Influenza	30.0	21.7	8.7	53.5	96.9	272.4	14.4	23.8	13.0	11.3	12.3
Pneumonia	76.5	73.7	67.8	106.1	117.2	269.8	121.0	114.3	106.5	100.3	106.1
Meningococcus meningitis	.7	.7	.9	1.0	1.3	2.8	3.5	1.5	1.3	1.5	1.7
Tuberculosis—all forms	110.2	114.2	117.4	137.9	156.5	189.0	188.9	190.2	197.8	204.5	206.7
Tuberculosis of resp'y system	100.4	103.6	105.6	124.0	141.6	171.2	172.3	172.8	180.0	185.2	186.6
Cancer—all forms	72.6	72.0	71.7	69.8	67.0	67.2	70.9	70.3	70.9	69.8	70.5
Diabetes mellitus	16.1	17.2	15.5	14.1	13.4	14.0	15.3	15.9	15.1	14.2	13.9
Cerebral hemorrhage, apoplexy	61.8	62.9	62.1	61.3	59.8	64.0	66.8	68.7	68.5	69.2	67.2
Diseases of heart	128.5	126.7	117.4	117.0	113.9	141.7	142.0	140.2	136.7	138.1	140.6
Diarrhea and enteritis	9.6	10.8	14.2	15.8	16.9	23.4	25.5	26.2	24.4	24.7	27.7
1 to 2 years	4.0	4.9	6.0	7.0	7.5	11.6	11.9	12.5	11.3	11.9	13.2
2 years and over	5.6	5.9	8.1	8.8	9.5	11.8	13.6	13.7	13.1	12.8	14.5
Chronic nephritis (Bright's Disease)	69.5	70.3	68.0	70.8	73.5	86.8	95.7	99.0	95.7	95.4	96.0
Puerperal state—total	17.9	19.0	19.8	23.0	20.0	27.4	18.2	17.6	18.0	19.8	20.0
Puerperal septicemia	6.9	7.4	8.5	8.6	6.7	7.3	7.5	7.2	7.2	8.4	9.1
Puerperal albumn. and convulsions	4.2	4.7	4.9	5.0	4.8	4.9	5.1	5.0	4.8	5.1	5.3
Accidents of pregnancy	1.8	1.7	1.6	3.1	3.0	6.9	1.6	1.4	1.8	1.7	1.7
Total external causes	77.5	71.8	72.0	72.0	94.2	128.9	106.7	99.5	88.2	89.2	98.3
Suicides	7.4	7.5	7.6	6.1	6.8	7.6	9.3	9.8	12.2	12.3	13.5
Homicides	7.3	6.3	6.7	5.8	6.9	6.2	7.4	6.9	6.9	7.0	7.2
Accidents—total	62.7	58.0	57.5	59.6	63.8	75.5	76.5	73.2	67.3	69.9	77.6
Accidental burns	6.3	6.1	6.6	8.1	8.1	9.0	8.9	8.8	8.6	8.4	9.0
Accidental drowning	6.7	7.3	8.2	6.7	8.6	9.4	8.7	9.7	11.9	10.0	12.1
Accidental traum. by fall	8.4	7.3	7.1	7.3	8.0	10.4	11.9	13.1	11.9	12.6	13.7
Accidental traum. by machines	1.7	1.6	1.0	1.7	1.6	2.4	2.0	1.7	1.4	1.5	2.0
Railroad accidents	4.9	4.1	3.9	5.2	5.7	7.8	8.5	7.9	7.4	7.5	9.0
Automobile accidents	15.4	13.6	12.2	11.1	10.7	10.3	9.7	7.4	5.4	4.8	4.1
All other accidents	19.4	18.0	18.5	19.5	21.2	26.1	26.8	24.6	20.7	25.1	27.7
War deaths	.....	.1	.1	.5	16.6	39.7	13.5	9.6	1.8	.....	.....
Other diseases and conditions	183.1	186.5	190.5	197.4	193.5	218.7	233.2	247.1	245.5	250.5	261.9

HEALTH RECORD FOR DECEMBER, 1923.

The deathrate in December, 1923 (8.5 per 1,000) was the lowest December figure ever recorded among the Industrial policyholders. This is a fitting close to a remarkable year in the health history of the Industrial population of the United States and Canada. Compared with the same month of 1922, the decline amounted to six per cent. The deathrate was lower than for December of the previous year for most of the causes listed in the Table on page 11. There was, however, the usual seasonal increase over November, 1923. The figures indicate clearly that the prevailing health situation is very favorable throughout the United States and Canada.

Suicides, homicides, accidents and automobile accidents, however, were more numerous than during December, 1922; and there were a few more deaths from certain diseases, for example, scarlet fever, cancer, cerebral hemorrhage and puerperal causes.

The general deathrate of the large cities of the United States during December, 1923 (12.4 per 1,000), was likewise slightly lower than for the corresponding month of 1922, and a trifle higher than the rate for the previous month of 1923. Compared with December, 1922, there were more cases of measles, scarlet fever, smallpox and typhoid fever; there were fewer cases of diphtheria, influenza and whooping cough. Compared with November, 1923, influenza, measles, scarlet fever and smallpox were more prevalent, but there was lower morbidity from diphtheria, malaria, typhoid fever and whooping cough.

In Preston, Minnesota, it became necessary to close the schools and churches to prevent the spread of a diphtheria epidemic. At Burbank, Wayne County, Ohio, the county health officials found it necessary to quarantine the entire village to prevent the spread of this disease. At Rock Island, Illinois, an outbreak of diphtheria occurred at the same time that measles reached epidemic prevalence.

Unusual prevalence of smallpox was reported during December from several states. In California, for example, there were 500 cases during the first four weeks of the month as compared with 36 in the corresponding weeks of 1922 and 311 during November, 1923.

More or less serious typhoid fever situations were reported from two states. In three December weeks, 126 cases, with 18 deaths, were reported in Chicago. Some of these cases were those of Chicagoans who contracted the disease outside of the city; others were

those of non-residents. In Evanston, Wilmette, Kenilworth, Winnetka, Glencoe and Highland Park, a considerable number of stores were ordered by the health authorities to cease selling a certain brand of oysters to which, it was believed, the outbreak had been traced. An epidemic at Fort Wayne, Indiana, was caused by pollution of the city water supply through seepage from the Maumee River.

Scarlet fever cases increased in December as compared with November. An outbreak of this disease was reported from Oyster Bay and Bayville, Long Island.

While no serious influenza situation has developed throughout the country, more cases were reported during December than for November. In two states, Arkansas and Alabama, the increases were considerable.

Cases of typhus fever were reported during December from three states, California, Alabama and Georgia.

There were a number of important health activities during December. At the Social Service House, Washington, D. C., clinics for the control of cancer and for asthma sufferers, as well as a mental hygiene clinic, were inaugurated. On December 9th, it was announced that work to determine the cause of infantile paralysis and, if possible, a remedy, will be undertaken by the Harvard University Infantile Paralysis Commission. The annual convention of the Florida Anti-Mosquito Association on December 6th was attended by delegates representing twenty-seven communities of that state.

Compulsory inoculation of all dogs against rabies was urged by the Health Officer of Newark, New Jersey, on December 4th.

A meeting was held in Washington, D. C., December 3d between the Federal Commissioner of Labor Statistics and representatives of labor and industrial accident commissions from twelve states, to make plans for unified reports of industrial accidents.

The table below shows the mortality among the Industrial policyholders for December, 1923; November, 1923; December, 1922, and for the year 1922.

METROPOLITAN LIFE INSURANCE COMPANY.

Deathrates Per 100,000 for Principal Causes, Premium-paying Business in Industrial Department. (Annual Basis.)

MONTHS OF NOVEMBER AND DECEMBER, 1923, AND OF DECEMBER, 1922.

CAUSES OF DEATH	RATE PER 100,000 LIVES EXPOSED			
	Dec. 1923	Nov., 1923	Dec. 1922	Year 1922
TOTAL—ALL CAUSES	846.3	778.8	899.0	882.9
Typhoid fever	4.6	5.1	4.8	5.7
Measles	3.2	1.5	5.9	4.3
Scarlet fever	5.1	3.4	4.4	4.9
Whooping-cough	1.7	2.4	2.3	2.6
Diphtheria	18.1	16.9	27.7	18.0
Influenza	14.2	6.8	14.1	21.7
Tuberculosis (all forms)	90.4	88.4	101.8	114.2
Tuberculosis of resp'y system	83.2	81.4	92.6	103.6
Cancer	73.9	71.0	71.4	72.0
Diabetes mellitus	14.2	12.8	*	17.2
Cerebral hemorrhage	66.9	55.6	65.8	62.9
Organic diseases of heart	127.0	119.1	129.2	126.7
Pneumonia (all forms)	69.2	59.2	87.1	73.7
Other respiratory diseases	13.5	12.8	14.5	13.7
Diarrhea and enteritis	5.4	6.0	6.1	10.8
Bright's disease (chronic nephritis)	70.6	62.0	74.0	70.3
Puerperal state	16.3	14.2	14.4	19.0
Suicides	6.8	6.0	5.8	7.5
Homicides	6.9	9.0	5.4	6.3
Other external causes (excluding suicides and homicides)	63.2	59.2	62.0	58.1
Traumatism by automobile	17.7	16.7	15.0	13.6
All other causes	175.3	167.4	202.2	173.3

*Not available.

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STATISTICAL BULLETIN,

Metropolitan Life Insurance Company,

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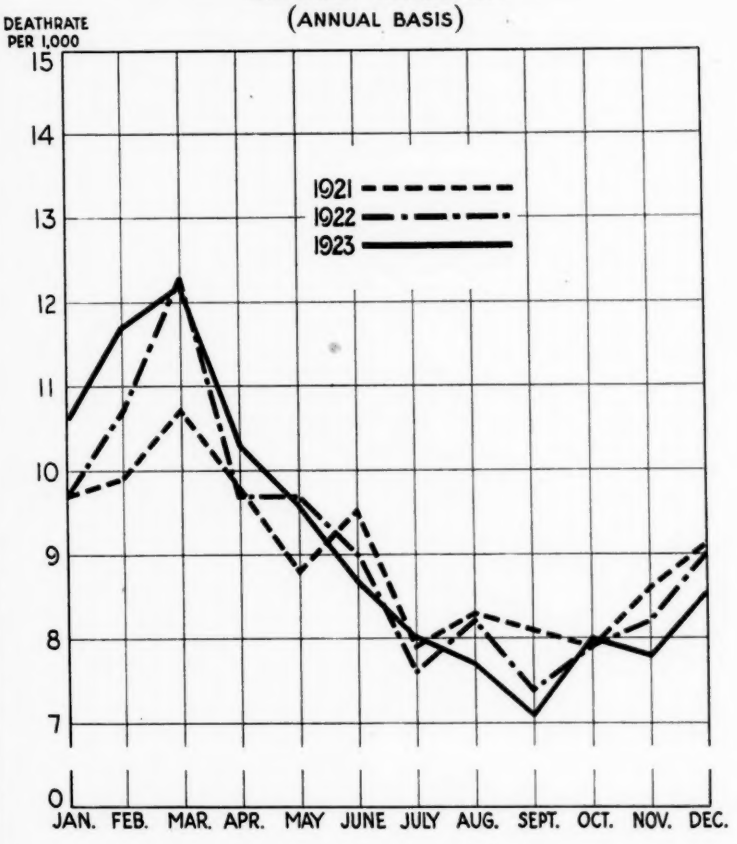
DEATHRATE PER 1,000
in SPECIFIED MONTHS *of*
1921-1922-1923

METROPOLITAN LIFE INSURANCE COMPANY
INDUSTRIAL DEPARTMENT
(ANNUAL BASIS)



	1921	1922	1923		1921	1922	1923
JAN.	9.7	9.7	10.6	JULY	7.9	7.6	8.0
FEB.	9.9	10.7	11.7	AUG.	8.3	8.2	7.7
MAR.	10.7	12.3	12.2	SEPT.	8.1	7.4	7.1
APR.	9.8	9.7	10.3	OCT.	7.9	7.9	8.0
MAY	8.8	9.7	9.6	NOV.	8.6	8.2	7.8
JUNE	9.5	9.0	8.8	DEC.	9.1	9.0	8.5

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